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1. [Control of numerous dispersed type power supplies]

Plural dispersed type power supplies (rotary machine power supplies for normal use and emergency use) are collectively controlled and managed by using a communication network and software. This system improves maintenance and control efficiencies of the dispersed type power supplies, and contributes to power supply and system operations.

[R&D status]

| | Virtual Power Plant | Dispatching Backup Generation |
|-------------------|--|---|
| Enforcing nucleus | <input type="radio"/> Encorp Corporation (founded in 1993) | <input type="radio"/> Invested by the Power Technology Development Public Corporation of the State of New York, and verified by Electrotec Corporation |
| Purpose | <input type="radio"/> To utilize as power supplies when supply and demand of power system are strained | <input type="radio"/> To utilize as peak cut measures when supply and demand of power are strained during hot season in the State of New York |
| Enforcing timing | <input type="radio"/> Developed products have been sold since 1996. | <input type="radio"/> Verification test has been started since 2001. |
| Enforcing state | <input type="radio"/> Currently, 1,000 units are controlled in the overall United States, and total capacity of the facilities has reached 300 MW. | <input type="radio"/> In Long Island of the State of New York, eight units of 4 to 6 MW class power generator for emergency use (Total capacity of the facilities is 30 MW.) are being tested together to verify the ability. |
| Others | <input type="radio"/> Approximately on the stage of practical use | <input type="radio"/> The State of New York bore the expenses. |

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[Virtual Power Plant (Encorp Corporation)]

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[Virtual Power Plant (Electrotek Corporation)]

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1. [System to supply power of numerous qualities (Power Park)]
Systems to supply power in response to power quality requests
by customers in energy supply areas such as a high technology
industrial complex where area is limited

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| | Delaware Premium Power Park | Pleasant Power Park |
| Enforcing nucleus | <input type="radio"/> American Electric Power Corporation <input type="radio"/> Siemens Power Corporation | <input type="radio"/> Real Energy, Panattoni Development, DTI Energy, BP/Solarex, AstroPower PowerLight Corporation, Nextek, Inc. |
| Purpose | <input type="radio"/> To supply power depending on different qualities in response to requests of customers within an area | <input type="radio"/> Same as the left hand column. |
| Enforcing time | <input type="radio"/> Verification test was conducted toward three years (from 2000 to 2002). | <input type="radio"/> Currently, facilities are under constructions. |
| Enforcing state | <input type="radio"/> Enforced in Retrofit Industrial Complex in Delaware, Ohio. <input type="radio"/> 11 companies (manufacturers, and so on) in the Complex participated. Scale of demand within the area has reached 14.4 MW. | <input type="radio"/> Verification test was conducted in North California. |
| Others | <input type="radio"/> Invested by EPRI | <input type="radio"/> Subsidized by DOE and California Energy Committee |

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1. [Power network system in the specific area]

Power supply systems controlled and operated by combining plural small dispersed type power supplies, power storage equipment, and power load facilities in various ways within limited areas such as commercial areas and industrial complexes

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| | CERTS (Consortium for Electric Reliability Technology Solution) |
| Enforcing nucleus | <input type="radio"/> Laurence Berkeley National Laboratories, University of Wisconsin, Sandia National Laboratories, Southern California Edison Power Corporation (SCE), Oak Ridge National Laboratories, LBNL Corporation |
| Purpose | <input type="radio"/> To firmly improve power supply efficiencies within specific customer areas, and further, to supply power in response to needs for the customers such as power supplies depending on qualities and other demands. |
| Enforcing time | <input type="radio"/> Research has been conducted since 1999. |
| Enforcing state | <input type="radio"/> For power supply models which combine various dispersed type power supplies, software simulations for economical efficiencies, load adaptability, and so on are being conducted. Unlike a centralized verification test, researches and developments are being conducted individually by assigning roles to the individual agencies. |
| Others | <input type="radio"/> The Energy Department of the Federal Government and California Energy Committee assisted the funds, and Consortium has been placed in the Laurence Berkeley National Laboratories. |